

# **The Role of Product Champion and Top Management Teams in New Product Innovation:**

## **A Case Study of Mechanical and Transport Division (MTD) – Kenya**

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### **Certification**

I, KIVUVA Jeremiah Nzioka (Student ID 52114624), hereby certify that this individual final report is my own original work. It has neither been used for any courses or exams nor been submitted for any diploma at any education institute. Ideas and information derived from works of other authors have been acknowledged in the text and or in the list of references. This work has not been published

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## **List of Abbreviations**

**AIA:** Appropriation in Aid

**MDGs:** Millennium Development Goals

**MTD:** Mechanical and Transport Division

**MTF:** Mechanical and Transport Fund

**NPD:** New product development

**PC:** Product Champion

**PI:** Physical Infrastructure

**PRSP:** Poverty Reduction Strategy Paper

**RME:** Regional Mechanical Engineer

**R&D:** Research and Development

**SAGA:** Semi-Autonomous Government Agency

**TMT:** Top Management Team

## **Abstract**

Product champions and top management teams have been cited by many scholars as key human factors which influence new product innovation. This study aims at examining the magnitude and or level of influence by which these two human resource factors have on new product innovation by investigating their significance. Both quantitative and qualitative methods were adopted for this study by the use of a questionnaire survey of 28 number of respondents who are employees of the Mechanical and Transport Division of the Ministry of Transport and Infrastructure in Kenya.

# **CHAPTER 1**

## **1.0. INTRODUCTION**

### **1.1. Research Background**

The study was conducted in Mechanical and Transport Division (MTD) which is a Semi-Autonomous Government Agency (SAGA) in Kenya under the Ministry of Transport and Infrastructure which mandated to play a key role in being a key advisor to the Government on all matters relating to Mechanical and Automotive Engineering and is also responsible for the co-ordination of procurement, standardization, maintenance and disposal of public service vehicles, plant, and equipment. In addition, the Department is responsible for the provision, maintenance, and renewal of construction equipment required for the development and maintenance of Physical Infrastructure (PI) with particular emphasis on roads.

This study was informed primarily by the significance of the Mechanical and Transport Division in contributing to the economic and social development of the country. The author sought to survey on the significance of human resource influence on new product innovation with an inclination to MTD which has a peculiar working environment as a SAGA.

The study chose to explore two relevant human resource aspects which highly relate with the operations of a SAGA where hierarchy of power is inevitable. The top management is considered to hold the utmost power in the institution while to cut across and influence diverse cadres, the product champions would come in handy. The top management teams are significant in affecting new product innovation in outcomes like strategic change Cho and Hambrick, (2006), firm growth, Stam and Elfring, (2008), and strategic conformity and

persistence Finkelstein and Hambrick, (1990). They do directly or indirectly, Lammerer, Zapilko and Menrad (2015). Also, Howell, Shea and, Higgins, (2005), in their study on product champions influence found that without dedicated product champion, ideas of product innovations may remain dormant for future development and implementation, In view of this, the study sought to investigate such influence of top management teams and product champions in MTD.

## **1.2: Work Environment in Mechanical and Transport Division**

The Mechanical and Transport Division of the Ministry of Transport and Infrastructure is the Principal adviser to the Government. The functions of the Agency are to plan, develop, manage, regulate and operate effective, economical and efficient mechanical and transport services, in line with the Government's efforts to institute reforms in all sectors of the economy. This is in keeping with the strategy for performance improvement in public service and the Poverty Reduction Strategy Paper (PRSP) to create bodies which are more service-focused and customer-friendly. In the present constitution the Division will, in addition, enhance the financial autonomy and in particular enable it to recruit and retain the caliber of staff it requires and enable it to discharge its functions effectively and efficiently.

The Division is also involved in the business of hiring out road construction and maintenance plant and equipment to both government and the private sector. This makes the department's position itself to being a key support in the development of infrastructure in the country. In the central workshop and major regional workshops some mechanical fabrications are done. In all this products and services, the fund is able to generate funds for its sustainability and also contribute to the Appropriation in Aid (AIA) kitty.

The fund has a variety of plant and equipment (excavators, graders, wheel loaders, dump trucks, rollers, pavers, horse and low beds, and other such types) which are available in different regions in the country under the management of Regional Mechanical Engineers (RMEs).

The Department has established regional and sub-regional workshops in order to pool its plant and equipment where they can easily be available for hire/lease. Being a Semi-Autonomous Government Agency (SAGA) it has effectively improved its service delivery. In the central and regional workshops, several designs, fabrication and, production functions are executed like making of saves, bolts and nuts, shear-pins, motor vehicle bodyworks and painting.

In view of the Kenya's Vision 2030 which was launched on 10<sup>th</sup> June 2008 with the objective of helping the country transform into a newly industrializing, middle-income country providing a high quality of life to all citizens by the year 2030 in a clean secure environment. The vision was based on three "pillars": Economic, Social and Political and its implementation were to be done in five-year medium-term plans with Kenya expected to meet its Millennium Development Goals (MDGs) by the deadline in 2015, although this has not been achieved. The development of physical infrastructure is ranked highly in the Poverty Reduction Strategy Paper (PRSP) in recognition of its role in poverty reduction and economic growth. The Department has been providing and ensuring availability and serviceability of construction equipment that are used by the Roads Department and the District Roads Committees for maintenance of roads (Kenya Government, 2016).

In the above-mentioned premises it, therefore, displays a clear indication that the success in the Mechanical and Transport Division (MTD) has a direct implication on the social and economic growth of the country and specifically in the roads infrastructure which forms a strong ground to enable the growth.

To ensure that the goals of the Division are achieved, one of the pivotal players is the human resource which is a major drive and force behind any institutional innovative capabilities. The department has severally engaged in hiring technical staff to ensure its succession productivity despite the tough economic situations in the country. All that withstanding, there is still significant deficiency of the technical personnel in the Division.

### **1.3. Research Objectives**

This study tries to understand the new product and service innovation status and strategy in the department. It also seeks to investigate how product champions and top management teams influence new product innovation in the Division in view of establishing key points of intervention to improve effectiveness and efficiency in new product and service development in the department.

### **1.4. Research Questions**

To attain the above objectives, the researcher sought to answer the question below,

- i. In what ways do product champions influence new product and services innovation in the Mechanical and Transport Division (MTD)?
- ii. In what ways do top management teams influence new product and services innovation in the Mechanical and Transport Division (MTD)?

## **CHAPTER 2: LITERATURE REVIEW**

This section seeks to explore the different views expressed by different authors on new product innovations and their significant in firms as they strive to ensure that they maintain their competitiveness, profitability, and relevance in the market. It further looks into the process involved in the launch of new product innovation and the challenges faced thereof as a firm undertakes to implement the same.

A deep review on how the two human resource aspects of the top management teams (TMTs) and product champions is investigated with the intent of trying to establish their points of influence in the launching and implementation process of new product innovations. This section, therefore, tries to form a ground into understanding the significance of TMTs and product champions in new product innovation.

### **2.1. New product innovation**

#### **2.1.1. Definitions**

The understanding of the definition of new product innovation has a significant importance in making it possible to form the base of the study since it makes is possible to be able to relate the variables under consideration and the objectives of the study.

Several writers, authors, and journal reviews give different definitions and explanations of what new product innovation is and its implications in the companies or institutions. In all these, there is a convergence of its great importance in the growth, sustainability, competence and market relevance of the institutions under consideration.

New product and service innovation is the process by which new problem-solving products and services are brought into use. (Amabile, 1988; Glynn 1996; Kanter 1983). It is worth noting that, having a new product or service development idea is insufficient unless it is practically implemented and some level of commercialization achieved (Pinchot, 1985; Thornberry, 2001; Zahra 1985). Appropriating the two at the same time leads to value creation and novelty to the community and therefore, new product innovation and entrepreneurship should be linked together (McFadzean et al, 2005).

### **2.1.2: Why New product innovation?**

New product innovation poses a big relevance in a firm's day to day operations. Both internal and external factors pressure any organization to always be competitive so that it can sustain or increase its profitability. This doesn't come on a silver platter and therefore, effort energies and resources must be expended so as to ensure the competitiveness of the organization is commensurate to the existing turbulence, competitiveness in the local and global environment. This calls for new ideas, formulas, programs or technologies to be employed so that a firm/business maintains the leading edge (Morgan, 1988; Delbecq, and Mills, 1985)

Management seeks to improve success in new products or services by re-engineering and reorganizing new processes and procedures so as to ensure optimization of available resources and ensure profitability. There are several factors that make the difference between success and failure in new product innovation. These include the development process, organization, strategy, innovative climate & culture and commitment and accountability by the



senior management (Cooper and Kleinshmidt, 1995). There is, therefore, a great need to investigate the factors which will influence them.

As tide and time wait for no man, continuous scanning and refocusing to keep pace with the ever-changing environment is of major concern for any firm. Griffin in her analysis on NPD practices, notes that NPD processes are continuously evolving and becoming more sophisticated and that the firms which don't keep their NPD practices to speed will suffer increasingly from competitive disadvantage. Empirically, the speed and quantity of new product and service development characterize market leadership (Roth and van der Velde 1992). This implicates that the focus on product development results from the combined pressures of increased competition, a rapidly changing marketplace, new technology, and new and pending legislative changes. All of these factors underscore the need to be able to design, develop, and launch, in a timely fashion, new products that are winners. A strong new product initiative is now considered an essential weapon in both offensive and defensive initiatives.

A research on NPD practices on updating trends and benchmarking best practices by Griffin (1997) showed that for a successful new product and service development, there is great need to track the process so as to ensure that the existing market and technological turbulences are catered for. This is because the firms operate in dynamic environments which are not stable but both competitive and evolve over time. Possible changes in business likely to impact the way NPD is practiced include; Increased levels of competition, rapidly changing the market environment, higher rates of technical obsolescence and shorter product life cycles. This, therefore, calls for the management of NPD processes to be so articulate and have them change relative to the above-stated forces so that firms remain profitable and competitive.

It is worth noting that, new product innovation processes are very necessary for effective launch and implementation and subsequent commercialization a point of concern being; assuring implementation, better managing the up-front portion, measuring the process better, continuously improving the process. Of key importance in the present times is incorporating customer needs in product development and managing the resource allocation process across projects. Also organizationally, effective implementation of multi-functional teams and that the success of NPD is related to the organization through multiple structures within each firm and none can closely be consistently associated with high performance but rather the whole spectrum. There is also a need for both tangible and visible top management support of NPD especially in terms of providing adequate funding and resources and explicit consistent strategies and best NPD practices may be rather Context-specific calling for some efforts to better define best practices within the context rather than the aggregate (Griffin 1997).

The launch of new product innovation need be looked into so as to be in a position to expose some of the possible ways by which forces of human resource influence can be attributed. A significant point of influence is by the decisions which are needed to be done to ensure that there are minimal challenges in the launch and implementation of the new product innovation. There are two key launch decisions which can be considered and employed whether launching consumer products or industrial products namely strategic and tactical launch decisions (Hultink, Hart, Henry Roben and Griffin, 1999).

Information flow both within and outside the firm is very necessary to ensure that new ideas are taken up and refined to be able to enhance New product innovation process (Burgelman, 1983). Technological innovation requires cross-fertilization of ideas (Kanter,

1988). In the event that specialization of labor is incumbent in an institution, personnel tends to focus on a defined area of involvement and consequently hinder any information flow a recipe to hindering NPD. To be able to break this inertia, a significant human resource influence is necessary to selling the idea and draw people into the process and facilitating in positive response by the organization.

The sections below seek to explore two; product champions and top management teams, of the many aspects of human resource which significantly influence new product innovation. Several dimensions by which they impact new product innovation are discussed.

## **2.2. Product Champion (PC)**

Product champions have been defined as individuals who informally emerge in an organization and make a decisive contribution to the innovation by actively and enthusiastically promoting its progress through the critical stages (Schon, 1963). They can also be viewed as people who adopt the new product innovation by taking up the project as their own and hence show personal commitment to it, contribute to the project by generating support from other people in the firm and advocate the project beyond job requirements in a distinctive manner. In such they accept risk, vigorously supporting or advocating the project, helping it through critical times, overcoming opposition, or leading coalitions, (Markhan, 1998);

The introduction and acceleration of new product innovation are of great importance to aiding the firm as a source of competitive advantage, survival, and renewal. Product

champion has been known to enthusiastically and actively promote innovation through the crucial organizational stages so as to overcome social and political pressures. Without dedicated product champion, ideas of product innovations may remain dormant for future development and implementation, (Howell, Shea and, Higgins, 2005)

Using the information on the Kipnis influence strategies (sanctions, higher authority, assertiveness, bargaining, ingratiation, coalition, and region), Markham (1998), examined what techniques product champion use to influence and support new product innovation and the effects they caused on the projects. The results informed the influence literature that people tend to use the same tactics over time and that product champion may not always deliver cooperative supporters, confident teams, or high performing projects. This revelation, therefore, leads to pointing out that the champion major contribution may occur at the project's inception or the Fuzzy Front End (FFE) and that their influence diminishes with time as the project continues.

Product champions according to Howel et al.(2005) in her study on business venturing lists several champion behaviors which are significant in influencing the new product and service development. These behavioral characteristics which he proved to be significant in his research using the act frequency method and further undertaking the principal components analysis and factor analysis, yielded a three-factor solution containing 14 items.

These three champion behavior sub-constructs were; enthusiasm and confidence, persistence under adversity and, getting the right people involved

As product champion seek to influence the NPD, they display different effects to their targets; this may involve tactical influence leading to a choice made by the target whose response will

indicate compliance and willingness to cooperate and consequently these will result into effect being felt on the project performance and team efficacy as shown in the diagram below.

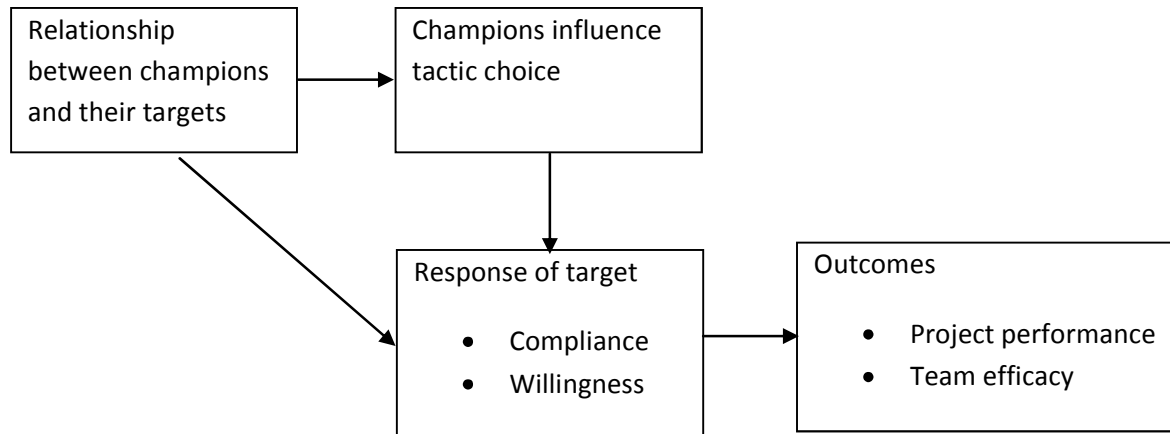


Fig 2.1: The effects of Product champions through their targets

Source: Markham (1998).

In all these activities, the product champion who are self-appointed and their role is not institutionalized, are mainly seeking to ensure that they are able to steer the product/service development across the ‘valley of death’(separates discovery from commercialization). The product champions seek to bridge the communication and cultural gaps, ensure the presence of best structures, resources, and expertise and or ensure that the vision is continuously clarified. This valley of death serves to determine either success or failure of a new product/service development as shown in the figure below.

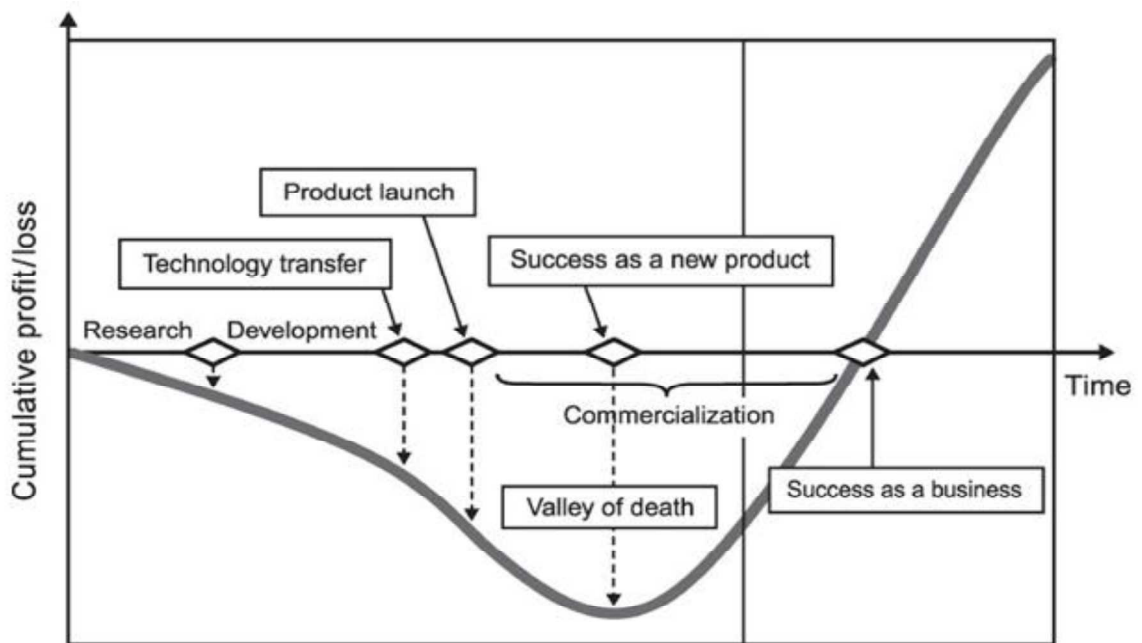


Fig 2.2. NPD Valley of death

Source: Markhan (2002)

Some of the steps necessary to be undertaken so as to ensure that the product becomes marketable include; discovering the commercial value, manifesting the discovery as a product, communicating this potential as a compelling business case, acquiring resources needed to establish the potential, using the resources to reduce the risk, seeking approval for formal development, translating the project into a criteria used for approval, decide to approve or not then developing and launching the product.

Over the years, many researchers have engaged in trying to come up with theories as to who product champions are, how they emerge, how they influence the new product innovation processes, and or their significant contribution to the product success. Markham

(2001) sought to establish some of the myths and truths about PCs and their interaction with the management. The research generated some very interesting results where some of the myths were; product champions are associated with market success, they get involved not from self-interests, they most likely appear in Marketing, because they are excited about the idea, product champion is more likely to be involved with radical than incremental changes and that product champions arise from the higher (or lower) levels of an organization.

Some truths, however, were realized which reinforced the solid perception that product champions are significant and their power and influence can't be trashed. These truths include; product champion associated with new product innovation projects, PCs get resources and keep projects alive, they are passionate about their activities, are persuasive, take risks, work in organizations that have a formal NPD process with NPD teams, as well as organizations that do it, provoke antagonists, championing is a socio-political process, they react to high-level strategy and that they are important in ensuring the success of a new product innovation.

Management should not by any means assume the role the PCs play and therefore an understanding what motivates their actions and what may be expected of them is paramount. Markham (2001) suggests that management can articulate the company strategy to the PCs, appoint antagonists to engage the PCs in a 'creative conflict' and provide training on interpersonal training since they usually thrive through relationships.

In the effort to strive to see to it that the new product and service comes to fruition, the PC suffers some obstacles which may be a reason for the unsuccessful new product innovation and commercialization. The antagonists who play a counteractive measure to the efforts put by the champion have been found to exist in many new product and service

development projects. Despite their unquestionable presence, very little if any has been done to show how they influence the way an institution supports projects. This however cannot rule out their ability to be able to check the champion influence since they serve to question the validity of their intents and motives, the authenticity of the projects, justification for resource allocation, the potentiality of success in the market if in any case, the product/service will succeed to be commercialized, (Markhan, Green, Basu, 1991; Markhan, Smith, 2001). Thus, Hypothesis 1 and 2 were developed.

H1 - There is a positive relationship between PCs and resource allocation

H2 - There is a positive relationship between PCs and NPD success

Product champions and antagonists appear together in complementary roles according to Van de Ven, and Grazman, (2002). From the role which the antagonists seem to play in a New product innovation makes it appealing for the management to appoint antagonists who would serve to monitor the actions of the product champions hence eliminating oversights.

### **2.3. Top Management Teams (TMTs)**

In the study of factors which influence new product innovation in the firm, it is of great importance that the people at the helm of top leadership and administration in the same firm be put in consideration. In a way or the other the CEO, Chairperson, CFO, COO and other top executives serve as the engine propelling the institution and hence, therefore, determine the direction to be taken. Their influence either directly or indirectly, within or without the institution or otherwise is undeniable.



There are several TMT characteristics whose consideration would shed a light on how they affect and or influence new product innovation. Drawing from the upper echelon theory, the demographic characteristics of TMTs like top management research and development (R&D) experience, marketing experience, and background diversity influence firm innovativeness. They do so by affecting outcomes like strategic change (Cho and Hambrick, 2006), firm growth (Stam and Elfring, 2008) and strategic conformity and persistence (Finkelstein and Hambrick, 1990). Therefore, by studying these characteristics, one can be able to establish the relationships between the TMTs and the organizational outcomes. This theory also focuses on the TMTs' cognitions, values, and perceptions and their influence on the process of strategic choice and subsequent performance outcomes (Smith et al., 1994)

One of the points of influence the TMTs possess is the ability to be able to use their experience and positioning in the firm to allocate resources and make adjustments in firm processes, products and or services. According to Hambrick and Mason, 1984 different members of the top management may have different functional experiences and therefore most likely differ in their attitudes, knowledge and perspectives and therefore are subject to being biased in their approach to innovativeness. This, therefore, affects the decisions they make towards R&D investment and the effectiveness in which these investments are linked with the innovation agenda of the firm (Cohen and Levinthal, 1990). Smith et al. 1994 observed that top managers can influence innovativeness not only through R&D but by their social interaction and communication which can result in team diversification and consequently lead the firm into adjusting or coming up with new processes, products or services.

According to Yuan , Guo and Fang, (2000) in a study on effects of TMTs functional background on firm innovativeness, they established that TMT and R&D experience influence innovativeness by making the firm invest in R&D (resource allocation) and the experience makes the firm leverage the R&D investment, improve deployment effectiveness and hence raising firm's innovativeness. Since the level of investment in R&D is directly indicative of firm's innovativeness, the influence of TMTs in resource allocation for R&D therefore consequently implicates that the firm's innovativeness is increased. Thus, Hypothesis 3 states:

Hypothesis 3: There is positive relationship between TMT and resource allocation

In cases where there is diversification in the marketing experience among the TMTs, they portray a tendency to be able to uncover many opportunities to share ideas and this opens the room to explore more on innovation opportunities. It, therefore, suggests that the higher the level of TMT functional diversity the higher the level of firm innovativeness.

In the pursuit of trying to investigate the influence of senior management on new product innovation, Lammerer, Zapilko and Menrad (2015), found out that there are some direct and indirect ways by which this influence is passed over. Project planning and process performance mediate about 50% of the total impact of the influence with project planning taking a big chunk of it. It follows that the decisions made by the top management teams in the process of planning and executing the processes thereof have a big role to play. The operations management responsibilities of the TMTs exhibit a positive relationship with both the planning and process performance and this also extends to the affiliated dimensions of the above stated.

The omnipresence tendency of TMTs in the firm's operations tends to have a significant influence on the results of NPD projects and especially an indirect way. This can happen in the form of moral support and knowledge transfer between the relevant players in the NPD processes. Directly the top management takes care of NPD projects by ensuring cross-functional communication and cooperation. They also play a big role in motivating (financial and time allocation coupled with decision-making autonomy) the players in the NPD project processes by making it possible to have shared goals and that players responsibly engage without endangering the whole process by promoting individual ambitions and non-disruptive behaviors.

The TMT influence on the organizational culture, heavyweight team policies, and cross-functional policies, were identified to be points of interaction by which of the senior management put in place significant policies they would effectively influence the NPD success. Worth noting is the fact that the implementation of these policies varies between the different national cultures since different countries are oriented differently as concerns collectivism or individualism in the NPD process execution. This would, therefore, trickle down to the way different firms would respond in policy formulations geared towards NPD success. Thus, the hypothesis below was developed.

H4 - There is positive relationship between TMTs and NPD success

Detelin & Manev in their study on TM leadership influence on innovation established that leadership factors bear a significant play in top management ability to influence innovation. This is displayed majorly in their ability to affect the socio-cultural aspect of the institution which goes ahead and influences the diversity of opinion generation and

implementation of the same, creating a protected environment and fostering personal identification and internalization.

Top management has a capability of easily influencing organizational innovations and in a rather different way and means as compared to product/market innovations. This is because whereas organizational innovations are purely directed internally, product/market innovations are both internal and external with a focus on the market. Also, for TMTs to ensure successful product market innovation they are usually indirectly involved whereas in the case of organizational innovation it is both direct and indirect engagement.

This study tries to explore a very peculiar situation of a Semi-Autonomous Government Agency (SAGA) which by its nature the management plays within the premises of the laid down regulations and at the same time exhumes some level of autonomy in trying to carry out its mandate. This, therefore, makes the research significant in trying to access the influence TMTs can exhibit under the above mentioned operating scenario.

Despite the many and diverse ways by which the product champions and top management teams have direct and or indirect influence on new product innovation, this study sought to investigate the influence under two major issues; resource allocation and success of the new project innovation projects. Also considered was their influence on the other personnel in the area of study, the Mechanical and Transport Division of the Ministry of Transport and Infrastructure.

## **CHAPTER 3: RESEARCH METHODOLOGY**

This study employed research questionnaire method of data collection and quantitative and qualitative methodology approach in the analysis of the data. In this chapter, a focus is given to the methodology, data collection, analysis and establishing the correlations of different variables using SPSS as the data analysis instruments.

### **3.1. Research Design**

In this section, a focus is given to the arrangements of the prevalent conditions for the collection of data and the analysis of the same with the aim of coupling this with the relevance of the research objectives with the economy in perspective (Kothari, 2004). This also incorporates the scheme, outline or plan used to generate answers to the research questions.

A descriptive survey method was employed in this study by using questionnaires to solicit responses from the sample population. The responses were aimed at gathering the views and perceptions of the respondents on some pertinent issues on the relationship of the product champion and the top management teams in establishment and success of new product innovation which the study aimed at establishing.

This method of study was employed due to its being inexpensive and its effectiveness in carrying out a study in the population under consideration.

### **3.2. Source of data and population**

The data used in this study was solely primary data from the Mechanical and Transport Division of the Ministry of Roads and Infrastructure – Kenya. The Division has its headquarters in Nairobi and Regional offices distributed all over the country.

The population under consideration in this study was all the top and mid-level managers in the Mechanical and Transport Division at the headquarters and all twenty (20) regional offices in the whole country. These officers served in the operations and technical & development sections of the division which are headed by Regional Mechanical Engineers (RMEs). The total population is 41 but only 39 could be accessed basically because of the nature of the work and geographical location which influenced the possible infrastructural means to convey and receive back the response.

Due to the size of the population and distribution, the maximum number of possible respondents i.e. the total population was considered as the sample to optimize the number of respondents across the country.

### **3.3. Data Collection Method and Procedure**

Data collected was purely primary data whose collection was solely done using questionnaires which were designed in line with the research questions and objectives of the study which was majorly informed by the comprehensive literature study done. A pretest was done with some 5 questionnaires after which the questionnaire was modified to eliminate ambiguities, duplicity and ensure clarity in some of the questions. After this it was finalized

and then a sum total of 39 questionnaires were issued to top and mid-level managers, the main focus strata of the division, but only 28 were given back a 72% response rate which was commendable considering the distribution of the population across the country and the nature of work for the field officers.

The questionnaire consisted of 20 questions with three likert scales. It had four (4) sections; one on personal information, the second exploring the Divisions NPD involvement and strategy while the third looked into issues of product champion recognition and influence whereas the last section dealt with the top management teams (TMTs) presence and influence on NPD projects.

## **CHAPTER 4: DATA PRESENTATION, ANALYSIS AND, INTERPRETATION**

### **4.1. Introduction**

In this chapter, data presentation will be done and a brief discussion covering the respondents' demography, Divisions strategy on NPD, PC and TMTs influence aspects of NPD projects, and then data analysis, and interpretation. The influence aspects of PCs and TMTs under consideration were related to the way they influence the allocation of funds, garner followers and ensure generation and support of NPD projects to maturity. Data is displayed using tables, bar charts and graphs where necessary.

### **4.2. Respondents demographic information**

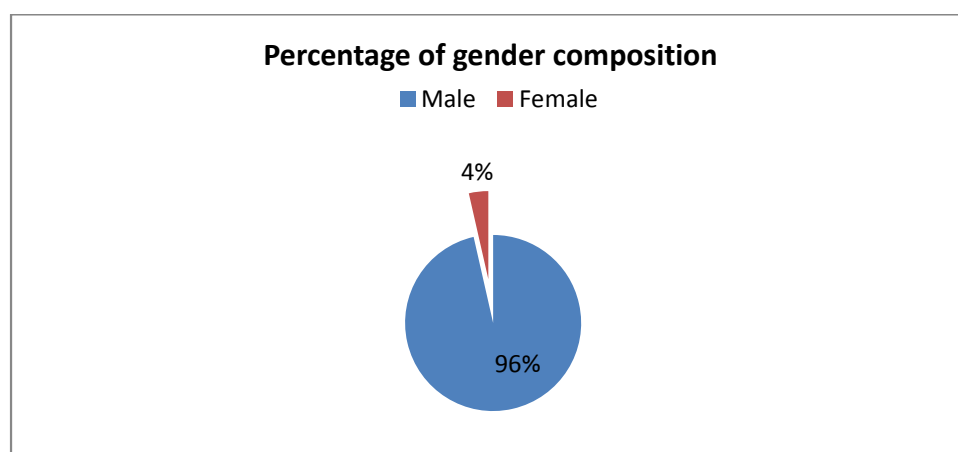
The questionnaires were ministered to 28 number of personnel in the Mechanical and transport Division of the Ministry of Transport and Infrastructure both in the headquarters in Nairobi and other regional offices across the country. They belonged to the top and the mid-level management levels that are significant in the initiation and propagation of NPD projects in an institution/firm.



**Table 4.1. Demographic information**

Label	Response	Percentage
Gender	Female	3.57%
	Male	96.43%
Age	30 – 35 Years	3.57%
	36 - 40 Years	14.29%
	41 - 45 Years	10.71%
	46 - 50 Years	10.71%
	Above 50 Years	60.71%
Management position	Top Management	14.29%
	Mid-level management	85.71%

Source: Study, 2016



**Fig 4.1: Gender demography of the respondents**

Source: Author

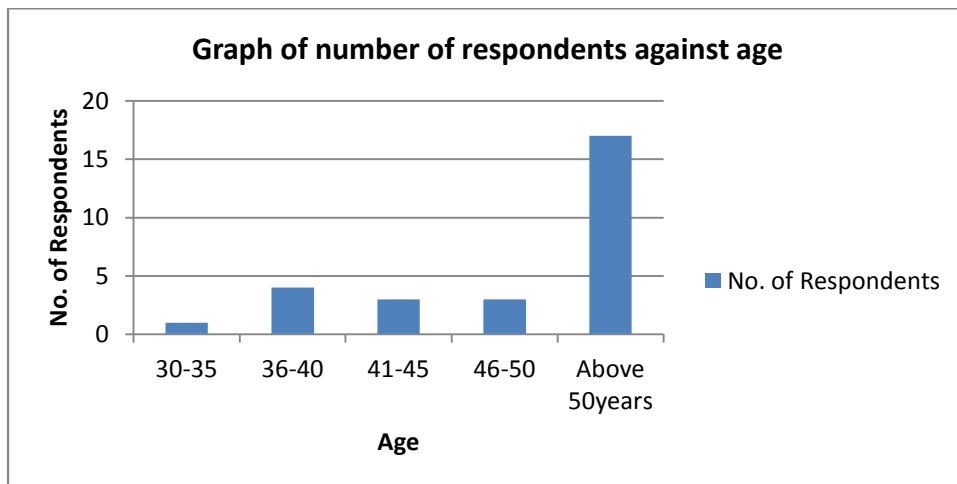


Figure 4.2: Age demography of respondents

Source: Author

Out the respondents, only one of them was a female forming only 3.57% of the population whereas the rest of the respondents were men, 96.43%.

The above is characteristic of the Division with the majority of the Top and middle-level management being dominated by males. The few females who work in MTD mostly work in the support departments but not on the key sections which carry the core mechanical functions. This is influenced in a big way by the number of females who enroll to undertake technical courses in colleges and universities in the country.

The age distribution is such majority lies in the above 50 years bracket, 60.71%, the 36 – 40 years bracket following in dominance having a 14.29% whereas both the 41 – 45 years and 46 – 50years age brackets consisted of 10.71%. The lower bracket of 30 -35years had only 3.57% of the population. Age in the MTD signifies experience and the longer the

individual respondent has worked in the division or rather in the government sector. This demography is significant of most of government institutions and parastatals since there have been gaps in employment due to bad economic situations and employment policies.

The top management team consisted of 14.29% of the respondents and who also belonged to the top age bracket of the respondents. The mid-level management had the biggest number of the respondents with a whopping 85.71%.

#### 4.3. Divisions' New Product Innovation and Strategy

This section sought to gather the respondents' view of the Divisions new product innovation level of engagement and strategy.

Table 4.2: Divisions' NPD innovation and strategy

Label	Response	Percentage
Division's Long term strategy	Yes	50.00%
	No	50.00%
Focus on NPD introduction	Yes	53.57%
	No	46.43%
Long-term new prods intro strategy	Yes	46.43%
	No	53.57%
Who developed NPD Innovations	Senior	
	Management	28.57%
	Collaboration of	64.29%

	diff levels	
	Government imposition	3.57%
	Mid and Lower	3.57%

Source: Author

The questionnaire enquired into whether MTD had a long term strategy on NPD projects. Half (50%) of the respondents had a feeling that the department had a long term strategy while the other half were of the contrary opinion. A bigger proportion, as concerns the focus on NPD introduction, 53.57% of the respondents indicated that the Division was having such an inclination whereas the remaining 46.43% felt that the Division didn't focus on new products development. The questionnaire also sought to establish the means by which different levels of management were involved and how the projects were initiated and executed. A significant 64.29% felt that the new product innovations were developed through collaboration among the different levels of management whereas 28.57% had a feeling that only the top management was involved in the NPD introduction.

Table 4.3. Likert scale results 1

Case	Description	Average
11_1	Strategic product design	2.75
11_2	New product innovation & implementation	2.82
11_3	Senior management support and involvement	3.18
11_4	Inclusion of the different management levels	2.86
11_5	Resource allocation	3.04
11_6	Overall success	3.21

Source: Author

From the likert scale calculations, the respondents score for the Divisions commitment to strategic product design, new product innovation and implementation and the inclusion of different management levels in the NPD process was poor. On the aspects o senior management support on new product innovation projects, resource allocation to the projects.

This displayed a general feel that there were significant new products developed in the Division and that new product innovation and success is possible if different levels of management collaborate in the strategy formulation and execution.

#### 4.4. Product champions and new product innovation

In this section, the study sought to establish the ease of the respondents to identify the PCs and get to know their views on how the influenced NPD initiation, from what level of management they came from, how they garnered followers, whether there was evidence of the presence of two or more PCs and if their presence influenced project success.

Table 4.4: Product champions and NPD

Label	Response	Percentage
PC recognition	Yes	85.71%
	No	14.29%
Position of PC	Top Management	42.86%
	Mid level	50.00%
	Lower management	3.57%
	Others	3.57%
PC garnering followers	Sanctioning	7.14%
	Higher authority	10.71%
	Assertiveness	42.86%
	Coalitions	25.00%
	Bargaining	14.29%
2 or more PCs	Yes	64.29%
	No	35.71%
PJ success by PC	Not sure	10.71%

	Yes	78.57%
	No	10.71%

Source: Author

A big proportion of the respondents, 85.71% said they could easily identify the PC from the rest of the personnel but for the rest 14.29%. A significant 50% felt that the PCs were from the mid-level management cadres while 42.86% indicated that PCs were from the top management. Concerning the way by which PCs garnered support in the populace, 42.86% felt that they did so through being assertive, 25% through coalitions, 10.71% used higher authority while 14.29% through bargaining and the remaining 7.14% applied sanctions to gain support. A 64% of the respondents had a view that they recognized more than two PCs in a given project while 78.57% could associate the success to the PCs involved.

Table 4.5. Likert scale results 2

<i>Case</i>	<i>Element</i>	<i>Average</i>
18_1	Easy to identify PCs	4.43
18_2	Without PC project won't succeed	4.00
18_3	PC as source and initiator of NPD	3.93
18_4	Resource allocation possible by PC	4.14
18_5	PC influence in all management levels	4.11

Source: Study 2016

From the likert results above, the respondents agreed that they could easily identify PCs, without PCs new product projects won't succeed. The results displayed an above average the number of respondents who recognized the product champion as the source of the NPD project while the respondent further agreed that PCs influenced resource allocation and that they could extend their influence across all different levels of management.

The above findings significantly support the hypothesis H3 and H4 since they clearly show that the PCs had a positive influence in resource allocation and success of the NPD projects and their influence could cut across the different levels of management.

#### **4.5. Top management teams and new product innovation**

The study tried to explore if there was a significant relationship between the top management and new product innovation and also identify the points of influence by which the top management engaged through. Some of the points of influence considered in the study were on resource allocation, initiation of NPDs, and garnering of following from the personnel to front for the success of the NPD project.

Table 4.6: Top management teams and new product innovation.

Label	Response	Percentage
TMT and NPD	Yes	89.29%
	No	10.71%

Source: Author



A big proportion of the respondents 89.29%, indicated that they could associate the genesis of new product projects for, the top management teams whereas the remaining 10.71% were of a contrary opinion.

Table 4.7 Likert scale results 3

Case		Average
20_1	TMTs play a key role in initiation of NPD projects	4.25
20_2	NPD projects initiated by TMTs highly succeed	3.86
20_3	TMTs oppose any projects they don't initiate	2.79
20_4	For an NPD project to succeed, TMTs have to be involved	4.39
20_5	TMTs play a big role in NPD resource allocation	4.46
20_6	Project funding solely depends on TMTs	3.68
20_7	TMTs support an NPD project regardless of source	2.89
20_8	An NPD project with TMT support tends to have a big following by the personnel.	4.11

Source: Author

As evident from the likert scale results above, the respondents agreed that top management teams play a major role in the initiation of NPD projects and that for the projects to succeed; their involvement was a major contribution. Concerning resource allocation, the respondents were of the view that TMTs had a great influence and further that NPD projects which had the support of the TMTs had a bigger following. However, the respondents disagreed on the fact that TMTs oppose any project they don't initiate and also that TMTs

support any project regardless of the source. There was significant above average number of respondents in the perception that projects initiated by TMTs highly succeeded and the funding of NPD projects solely depended on the TMTs.

Results emanating from the survey significantly indicate that TMTs involvement in the genesis of new products in the Division and also their contribution to the success of the same NPD projects regardless of their genesis was positive.

#### 4.6. Correlations

Using the Pearson R correlation in SPSS, the relationship of different variables was established. This helped in establishing if there was a significant relationship between the selected variables.

Table 4.8. Pearson's correlations results 1

		Presence of long-term strategy	Implementation of NPD	Long-term NPD strategy
Presence of long-term strategy	Pearson Correlation	1	.632**	.645**
	Sig. (2-tailed)		.000	.000
	N	28	28	28
Implementation of NPD	Pearson Correlation	.632**	1	.589**
	Sig. (2-tailed)	.000		.001
	N	28	28	28
Long-term NPD strategy	Pearson Correlation	.645**	.589**	1
	Sig. (2-tailed)	.000	.001	
	N	28	28	28

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Source: Author

From the table above, there is a significant positive relationship between the presence of a long-term Divisions strategy and the implementation of New product innovation projects,  $r(26) = 0.632$ ,  $p = 0.000$ . These results signify that for the division to have a sustained NPD projects implementation, a long term strategy needs be in place. The table also shows that; there is a significant positive relationship between implementation of NPD projects and the

existence of long-term NPD strategy,  $r(26) = .0589$ ,  $p = 0.001$ . Also, there is a significant positive relationship between the presence of a long-term NPD strategy and division's long-term strategy,  $r(26) = 0.645$ ,  $p = 0.000$ .

From the above correlations, it is evident that the success of an NPD program/project is highly dependent on the presence of strategy for both the firm and or for the implementation of NPD projects.

Table 4.9. Pearson's correlations results 2

		Divisions' focus on NPD	Long-term NPD strategy
Divisions' focus on NPD	Pearson Correlation	1	.723**
	Sig. (2-tailed)		.000
	N	28	28
Long-term NPD strategy	Pearson Correlation	.723**	1
	Sig. (2-tailed)	.000	
	N	28	28

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Source: Author

The above correlation table shows that there is a significant positive relationship between the division's focus on NPD projects and the existence of a long-term NPD strategy,  $r(26) = 0.723$ ,  $p = 0.000$ . This implicates that for the department to a successful long-term NPD strategy, an unwavering focus on NPD is key.

Table 4.10. Pearson's correlation results 3

		Senior management support and involvement	New product development & implementation	Inclusion of the different management levels
Senior management support and involvement	Pearson Correlation	1	.554**	.758**
	Sig. (2-tailed)		.002	.000
	N	28	28	28
New product development & implementation	Pearson Correlation	.554**	1	.555**
	Sig. (2-tailed)	.002		.002
	N	28	28	28
Inclusion of the different management levels	Pearson Correlation	.758**	.555**	1
	Sig. (2-tailed)	.000	.002	
	N	28	28	28

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Source: Author

The above table portrays three significant relationships; there is a significant positive relationship between inclusion of different management levels of management and senior management level support and involvement in NPD projects,  $r(26) = 0.758$ ,  $p = 0.000$ . A significant relationship between inclusion of different levels of management and New product innovation and implementation,  $r(26) = 0.555$ ,  $p = 0.002$ , and also a significant relationship between the senior management support and involvement and success of NPD innovation and implementation.

The above correlations signify that the senior management involvement and the inclusion of different levels of management in the process of NPD play a very significant role.

Table 4.11. Pearson's correlation results 4

		Without PC project won't succeed	PC as source and initiator of NPD	Resource allocation possible by PC
Without PC project won't succeed	Pearson Correlation	1	.724**	.551**
	Sig. (2-tailed)		.000	.002
	N	28	28	28
PC as source and initiator of NPD	Pearson Correlation	.724**	1	.476*
	Sig. (2-tailed)	.000		.010
	N	28	28	28
Resource allocation possible by PC	Pearson Correlation	.551**	.476*	1
	Sig. (2-tailed)	.002	.010	
	N	28	28	28

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

Source: Author

From the table above, we can deduce that there is a significant positive relationship between the success of an NPD project and product champion being the source and initiator of the project,  $r(26) = 0.724$ ,  $p = 0.000$ . There is also a significant positive relationship between the success of NPD project and PC being the source or the resources to carry on the NPD project.  $R(26) = 0.551$ ,  $p = 0.002$ .

These results significantly indicate that the PCs play a big role in resource allocation and success of NPD projects in the Division

Table 4.12. Pearson's correlations results 5

Correlations		TMT role in resource allocation	NPD projects originating from TMTs	NPD project success dependency on TMTs	TMTs role in NPD initiation
TMT role in resource allocation	Pearson Correlation	1	.238	.538**	-.063
	Sig. (2-tailed)		.222	.003	.750
	N	28	28	28	28
NPD projects originating from TMTs	Pearson Correlation	.238	1	.141	-.729**
	Sig. (2-tailed)	.222		.474	.000
	N	28	28	28	28
NPD project success dependency on TMTs	Pearson Correlation	.538**	.141	1	.015
	Sig. (2-tailed)	.003	.474		.941
	N	28	28	28	28
TMTs role in NPD initiation	Pearson Correlation	-.063	-.729**	.015	1
	Sig. (2-tailed)	.750	.000	.941	
	N	28	28	28	28

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Source: Author

There is also displayed a significant positive relationship between the TMTs role in resource allocation and the success of the NPD project being depended on the TMTs,  $r(26) = 0.538$ ,  $p = 0.003$ .

There is an insignificant positive relationship between having an NPD project originating from the top management and the success of the same depending on the top management,  $r(26) = 0.141$ ,  $p = 0.474$ .

This shows that the TMTs play a big role in resource allocation and success of NPD projects

## **CHAPTER 5: FINDINGS AND DISCUSSION**

This chapter seeks to summarize the findings on three different areas under consideration namely; departments NPD strategy and implementation, product champions and, top management points of influence on NPD success and resource allocation.

The study aimed at exploring whether or not the department had an NPD strategy coupled with its long-term strategy. Also a survey on how different the different levels of management interacted in the formulation and execution of NPD projects was investigated. The revelation out of this would be a significant finding since it would help understand the division's present and future NPD strategy alignment.

By considering the Pearson's correlation correlations between; the presence of a long-term Divisions strategy and the implementation of new product innovation projects, the presence of a long-term NPD strategy and division's long-term strategy and the relationship between implementation of NPD projects and the existence of long-term NPD strategy were observed to have significant positive correlations. These results showed that there was the presence of a long-term strategy on NPD and that it significantly influenced the success of the same.

From the reviewed literature, many authors indicated that the role of product champions is very significant in the initiation and success of New product innovation and also they are key in lobbying for resource allocation and in garnering support across the different departments of the institution, (Maidique 1980; Markhan, 1998 ; Sturm , Schimpf and Götzfried , 2009)



Respondents agreed that they could easily identify PCs and that without PCs new product projects won't succeed. The results displayed a significant above average positive response in the in recognizing the product champion as the source of the NPD project while the respondent further agreed that PCs influenced resource allocation and that they could extend their influence across all different levels of management.

The correlations between the success of an NPD project and product champion being the source and initiator of the project, the success of NPD project and PC being the source or the resources to carry on the NPD project had significant and positive correlations.

Different authors associated the TMTs with different significant roles as concerns their influence of NPD, they include; affecting outcomes like strategic change (Cho and Hambrick, 2006), Firm growth (Stam and Elfring, 2008), and strategic conformity and persistence (Finkelstein and Hambrick, 1990).

Results emanating from the survey echoes the above significantly relate positively with the TMTs involvement in the genesis of new products in the division and also their contribution to the success of the same NPD projects regardless of their genesis.

According to Yuan, Guo and Fang, (2000) study on effects of TMTs functional background on firm innovativeness; they established that TMT and R&D experience influence innovativeness by making the firm invest in R&D which is a significant indicator of NPD success. This proposition was highly supported since the Pearson's correlations coefficient on the TMTs role in resource allocation and the success of the NPD project being depended on the TMTs which was significantly positive.

TM leadership influence on innovation has a significant play in top management ability to influence innovation. Their ability to affect the socio-cultural aspect of the institution which goes ahead and influences the diversity of opinion generation and implementation of the same, creating a protected environment and fostering personal identification and internalization (Detelin and Manev, 2005). Pearson's correlation on the inclusion of different management levels of management and senior management level support and involvement in NPD projects had a positive significant correlation and therefore supporting this proposition.

## **CHAPTER 6: CONCLUSIONS**

The survey solicited some conclusions which implicated that there were significant new products developed in the Mechanical and Transport Division and that new product innovation and success is possible if different levels of management collaborate in the strategy formulation and execution. From the Pearson's correlations, it was evident that the success of an NPD program/project is highly dependent on the presence of strategy for both the firm and or for the implementation of NPD projects.

The responses generated concerning the significance of PCs role in resource allocation and success of NPD projects in MTD were significantly positive. These findings, therefore, comes handy in supports the hypothesis H1 and H2 of this study. Therefore, PCs influence was found to be significant in the Division and cut across all different levels of management.

The role of top management teams in resource allocation was explored and was found to have some positive results both in the questionnaire responses and Pearson's correlations that the TMTs play a big role in resource allocation and success of the new product innovation projects they are involved in. This, therefore, supports the hypothesis H3 and H4

## **6.1. Managerial implications**

This study has aided in establishing that the role and influence of top management and product champions are significant in resource allocation and success of new product innovation in MTD. These, therefore, serves to inform that a focus in the points of influence of the two and fostering their positive influence will definitely lead to increased NPD success in the department.

Since products champions are key success factors for NPD projects, the department can decisively choose to collaborate with them and have a structured way of engagement to ensure positive influence is tapped and optimized. The structured engagement will ensure also that there is also monitoring of the PCs so that in case there are insufficiencies in their engagement they can be checked promptly this being done with the understanding of their significant influence.

The top management teams' role in the initiation, aiding in resource allocation and success of NPD projects is of value to the department if it is fully utilized by having a well laid down overall Division long-term strategy and coupling it together with NPD strategy. This would ultimately make it possible for the Mechanical Division to continuously grow and improve in its NPD capabilities and thus making it achieve its national goals of ensuring that it plays a major role in construction and maintenance of infrastructure in the country and consequently improve the economic development of the country.

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## **APPENDICES**

### **Appendix 1**

#### **RESEARCH QUESTIONNAIRE**

**The Role of Product Champion and Top Management Teams in New product innovation: A case of Mechanical and Transport Division (Ministry of Transport and Infrastructure)**

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## **Information for the respondents**

### **Purpose of survey**

This research tries to investigate the role of product champions (PCs) and top management teams in influencing new product innovation in view of trying to improve effectiveness and efficiency in their execution.

The information gathered from this survey will be used in a research thesis on the above-mentioned institution (APU) to aid establish the influence of product champions and top management teams in new product innovation. The thesis is an academic requirement and a partial fulfillment of Masters Degree in Business Administration. Thus, I would like to request all respondents please answer and fill in the information to this questionnaire. All personal information will keep as confidentially and the data will use in the research only.

### **Planned data linkage**

To increase and improve the analytical potential of this survey, the researcher plans to combine this data with other interrelated data from authentic sources to make it possible to make conclusive deductions.

### **Who should fill the questionnaire?**

The senior management, middle-level management and section heads who have a clear knowledge of the department and its strategic vision and are familiar with the day to day operations of the department.

**Questionnaire on the role of product champions and top management teams on new product innovation: A case of Mechanical and Transport Division (Ministry of Transport and Infrastructure)**

**A. Personal information**

1. Gender:

Male ☐

Female ☐

2. Age group :

30 – 35 years ☐

36 - 40 years ☐

41 – 45 years ☐

46 - 50 years ☐

Above 50years ☐

3. Management position (tick as appropriate)

Top management ☐

Middle management ☐

**B. Departments New Product Innovation Strategy**

4. Does the department have a long-term innovation strategy?

Yes ☐

No ☐

5. Does the department focus on maintaining or improving its new product innovation and innovative capabilities?

Yes ☐ No. ☐

6. Does the department focus on introducing new or significantly improved product innovations regularly?

Yes ☐ No. ☐

7. Does department's long-term focus mainly seek to introduce new or significantly highly innovative products?

Yes ☐ No. ☐

### **C. Product innovation**

A new product innovation is the implementation of a new or significantly improved product, distribution method, or support activity for your goods or services.

- Product innovations must be new to your enterprise, but they do not need to be new to your market.
- The innovation could have been originally developed by your enterprise or by other enterprises.
- Exclude purely organizational innovations.

8. Did the department introduce new or significantly improved new products in the near past?

Yes ☐ No ☐

9. Who developed these new product innovations? (Tick the appropriate)

Mainly the senior management ☐

Mainly collaboration with different levels of management ☐

Mainly through imposition by the government through policies and circulars ☐

The middle and lower levels of management ☐

10. In your view, who do you think should take the centre-stage in developing these innovative processes?

Mainly the senior management ☐

Mainly a collaboration with different levels of management ☐

Everyone in the department ☐

The lower levels of management ☐

11. How would you rate the department overall New product innovation in the following attributes from a score of 1-5 (1 - Very poor, 2 Poor, 3 average, 4 good and 5 excellent) on the different given attributes

	Attribute	1	2	3	4	5
1	Strategic product design					
2	New product innovation & implementation					

3	Senior management support and involvement					
4	Inclusion of the different management levels					
5	Resource allocation					
6	Overall success					

#### **D. Product champions**

The introduction and acceleration of new product innovation (NPD) is of great importance to aid the firm as a source of competitive advantage, survival, and renewal. Champions have been known to enthusiastically and actively promote innovation through the crucial organizational stages so as to overcome social and political pressures.

The Product Champions (PCs) are people who adopt the new product innovation by adopting the project as their own and hence show a personal commitment to it, contribute to the project by generating support from other people in the institution and advocate the project beyond job requirements in a distinctive manner.

12. Are you able to establish some of the personnel who served as champions in some of the NPD projects?

Yes ☐

No. ☐

13. From what cadre of personnel did the PC come from? (Tick as appropriate)

Top management ☐

Mid-level management ☐

Lower-level management ☐

Others ☐

14. How did the champion garner his/her followers from fellow colleagues? (Tick as appropriate)

Sanctioning ☐

Higher authority ☐

Assertiveness ☐

Coalitions or ☐

Bargaining ☐

15. Have you ever noticed an incidence of two or more product champions in the same projects?

Yes ☐

No ☐

16. Did the project they were involved succeed;

Yes ☐

No ☐

17. Would you attribute the success or failure of the above to the PCs

Yes ☐

No. ☐

18. PC identification and influence

	Description	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	It is very easy to identify a project champion among his/her colleagues					
2	Without the project champion the NPD wouldn't succeed					

3	The PC was the source and initiator of the new product					
4	Resource allocation was significantly possible because of the PC					
5	The PC influence applied in all levels of management and cadres					

#### **E. Top management teams**

19.Are there some NPD projects which have their origin from the top management team?

Yes ☐

No. ☐



20. From a scale of 1-5 (where 1 is not involved while 5 is highly involved), to what degree do you think the top management in the department is involved in NPD? (**Tick one as appropriate**)

	Description	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	TMTs play a key role in initiation of NPD projects					
2	NPD projects initiated by TMTs highly succeed					
3	TMTs oppose any projects they don't initiate					
4	For a NPD project to succeed, TMTs have to be involved					
5	TMTs play a big role in NPD resource allocation					
6	Project funding solely depends on TMTs					
7	TMTs support a NPD project regardless of source					
8	A NPD project with TMT support tends to have a big following by the personnel.					